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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/469,597	12/22/1999	JAMES E. ANGELO	S01.12-0543	5141

7590 12/17/2002

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EXAMINER

KAPADIA, VARSHA A

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 12/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

HR

Office Action Summary

Application No.

09/469,597

Applicant(s)

ANGELO ET AL.

Examiner

Varsha A Kapadia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

This office action is responsive to the amendment filed on September 23, 2002.

Rejection Under 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-2, 7-8, 10-12, 14-15, 18-19 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Evans et al.(5,862,015)

With regards to claims 1-2 and 19 Evans et al discloses a disc drive comprising:
A disc rotationally coupled to a chasis; a movable head suspension assembly...(see abstract, fig.1 and disclosure thereof); a vibration transducer... (see co.2 lines 17-50, figs. 1,3 and 8 element 10 and disclosure thereof.) a detector...(see col.4 lines 55-col.5 line 12 and col.7 lines 41-52). Furthermore, the threshold amplitude is considered to be inherent in the detector because Evans et al. further discloses that the signals output from the transducer can be used to facilitate "correction or control of head off-neutral motion as necessary." In order to determine the

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necessity and the degree of necessity, the output signal level must have been evaluated with respect to reference or threshold level.

With regards to claim 21, Evans et al. discloses that the vibration is caused due to the head vibration (see abstract).

With regards to claims 12 and 14, the limitations are drawn to the method of using the disc drive apparatus recited in claims 1-2 and 19. Therefore method claims 12 and 14 correspond to apparatus claims 1-2 and 19 and are rejected for the same reasons of anticipation as used above.

With regards to claims 7, Evans et al discloses a process controller coupled to the detector as claimed (see col.8 lines 35-46 and the paragraph bridging cols.6 and 7).

With regards to claim 15, the limitations are drawn to the method of using the disc drive apparatus recited in claims 7. Therefore method claim 15 correspond to apparatus claim 7 and are rejected for the same reasons of anticipation as used above.

With regards to claim 8, Evans et al discloses a microactuator controller coupled to the transducer as claimed (see col.4 lines 50-54)

With regards to claims 10 and 11, Evans et al discloses a transducer configured to operate between detection mode and actuation mode... (see col.5 lines 5-27).

With regards to claim 18, the limitations are drawn to the method of using the disc drive apparatus recited in claims 10-11. Therefore method claim 18 correspond to apparatus claims 10-11 and are rejected for the same reasons of anticipation as used above.

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Rejection Under 35 U.S.C. 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4, 9, 16-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans et al in view of Perry (3,688,287).

With regards to claims 3-4, 16 and 20, Evans et al discloses the invention as described above in this office action. Evans et al further discloses the capability to detect at least one of a bending mode or torsion mode frequency (see col.4 lines 30-49 and col.6 lines 28-30). Evans et al fails to specify that the detector includes a frequency filter as claimed.

Perry, however discloses filter as claimed (see fig.1 element 30 and disclosure thereof).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Evans et al with the above teachings from Perry in order to provide a detector including a frequency filter to differentiate the undesired frequency from the normal operating frequency and hence to prevent the damage between the head and the disc accurately, as taught by Perry (see col.4 lines 6-10)

With regards to claims 9 and 17, Perry further discloses a disc drive including a plurality of discs and plurality of heads as claimed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Evans et al with the above teachings from Perry in order to provide a disc

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drive having a plurality of disc and plurality of heads in order to satisfy the need for efficient disc drive and hence save time for the user.

Claims 5-6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans et al in view of Novotny (6,362,542).

With regards to claims 5-6 and 13, Evans et al discloses the invention as described above in this office action. Evans et al fails to specify that the transducer is a piezoelectric material or is an electrostatic transducer.

Novotny, however discloses that the transducer used to control the position of the head is a piezoelectric material or electrostatic (see col.1 lines 35-37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Evans et al with the above teachings from Novotny to provide a transducer that is piezoelectric or electrostatic since both are well known and widely used as an alternate material and hence to provide user with an alternate since no unexpected results are to occur.

Prior Art Cited

Reference to Kasiraj et al (5,777,815) cited of interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Varsha A Kapadia whose telephone number is (703) 305-4198. The examiner can normally be reached on Mon-Fri from 6:00 to 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth, can be reached on (703) 308 4825. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600